



Use Case- Ethics



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Use Case: Ethical considerations in AI-assisted Medical Diagnosis



Imagine a healthcare provider implementing an AI system to assist doctors in diagnosing patients. The AI system is designed to analyze medical images, such as X-rays or MRIs, and provide suggestions for potential diagnoses. However, **ethical dilemmas arise during the development and implementation of this AI system.**

Step 1: Developing the AI System



- Algorithm Design
- Data quality and bias
- Patient privacy and Consent

Step 2: Testing and Validation



- Clinical Validation
- Ethical Review board

Step 3: Implementation and Patient Welfare



- Doctor-AI collaboration
- Transparency and Informed consent

Step 4: Ethical Challenges and Responses



- Bias Mitigation
- Patient Autonomy

Step 5: Continuous Improvement



- Feedback Loop
- Ethics training and guidelines
- Regulatory Compliance

Scenario Question

Scenario: Ethical Considerations in AI-Powered Personalized Advertising

Question: Imagine a large technology company developing an AI system for personalized advertising. This system aims to analyze user behavior, preferences, and online activity to deliver targeted advertisements. However, ethical challenges emerge as the company navigates the fine line between effective advertising and potential invasions of privacy and manipulation.

How can we balance the effectiveness of AI-driven personalized advertising with the protection of user privacy, autonomy, and the prevention of potential manipulation tactics that exploit vulnerabilities?